State of California Department of Fish and Wildlife
DUTY STATEMENT
DFW 242A (REV. 09/28/21)

☒ **PROPOSED**
☐ **CURRENT**

Department Statement:
California is one of the most biodiverse places on the planet. As such, the Department of Fish and Wildlife (CDFW) values diverse employees working together to protect nature for all Californians. CDFW is committed to fostering an inclusive work environment where all backgrounds, cultures, and personal experiences can thrive and connect others to our critical mission.

RPA #E-FB 21-044

INSTRUCTIONS: A duty statement and organizational chart must be submitted with each Request for Personnel Action, Form 242	EFFECTIVE DATE

DFW DIVISION/BRANCH/REGION/OFFICE Wildlife and Fisheries Division / Fisheries Branch	POSITION NUMBER (Agency-Unit-Class-Serial) 565-033-5578-905
UNIT NAME AND LOCATION Genetics Research Lab, Sacramento	CLASS TITLE Research Scientist I (Microbiological Sciences)
INCUMBENT	CURRENT POSITION NUMBER (Agency-Unit-Class-Serial)
BRIEFLY DESCRIBE THE POSITION'S ORGANIZATION SETTING AND MAJOR FUNCTIONS Incumbent will work under the supervision of a Research Scientist Supervisor, and under the lead of a Research Scientist III, in planning and carrying out fisheries genetic analyses of limited scientific scope and complexity and as a team member on larger more complex scientific studies. Specifically, the individual will be assigned to genetic analyses of native fishes under an approved State Wildlife Grant (SWG) award.	

PERCENTAGE OF TIME PERFORMING DUTIES	INDICATE THE DUTIES AND RESPONSIBILITIES ASSIGNED TO THE POSITION AND THE PERCENTAGE OF TIME SPENT ON EACH. GROUP RELATED TASKS UNDER THE SAME PERCENTAGE WITH THE HIGHEST PERCENTAGE FIRST. (USE THE REVERSE SIDE IF NECESSARY.)
	ESSENTIAL FUNCTIONS:
15%	Perform analytical procedures in the California Department of Fish and Wildlife Genetics Research Laboratory (CDFW-GRL) to support the genetic analyses of native fishes. Procedures include Deoxyribonucleic Acid (DNA) extraction, amplification, genotyping, sequencing and associated statistical analyses of results using a variety of computational methods. More specifically, perform genetic typing of Single Nucleotide Polymorphism (SNP) genetic markers using genome-wide DNA sequence data, targeted amplicon sequencing, and marker-specific genetic typing assays, and analyze the genetic data using R and Unix shell scripting.
20%	Perform scientific literature reviews of current native fish genetic studies and reports to identify genetic information gaps that may hinder effective CDFW species management and conservation goals.
15%	Perform environmental DNA (eDNA) analysis in the CDFW-GRL. This includes field collection of eDNA samples, DNA extraction, genotyping, and optimization of new eDNA genetic typing assays for native fishes.
15%	Write protocols for genetic laboratory procedures and technical and administrative reports that communicate results of ongoing genetic analyses.
10%	Perform laboratory instrument and reagent Quality Assurance/Quality Control (QA/QC) in accordance with current CDFW-GRL laboratory practices.

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10%	Track inventory of essential laboratory supplies and assist with ordering as needed.
10%	Instruct laboratory seasonal staff and volunteers on laboratory safety, methods and proper use of laboratory instruments.
	NON-ESSENTIAL FUNCTIONS:
5%	Perform other office and lab duties as needed.
	KNOWLEDGE AND ABILITIES
	Knowledge of:
	Although all applicants must possess knowledge of the following, it is expected that the level of sophistication, depth, and thoroughness of public health scientific research knowledge will vary to the class level and scientific specialty: current scientific research literature and trends applicable to the scientific research area; principles and procedures of scientific research planning, design, methodology and analysis; methods of preparation of scientific research reports; scientific statistical methods and procedures; data processing techniques; bibliographic survey or previous related scientific research techniques; determination and qualification of variables and mechanization of compilation of scientific data.
	Ability to:
	Although all applicants must demonstrate possession of the following abilities, it is expected that level of attainment will vary relative to the class level: evaluate the adequacy of proposed scientific research designs and techniques; think independently and creatively; establish and maintain cooperative relations with professional staff and with officials of Federal, State, local, university and private research organizations; communicate effectively, prepare scientific articles for publication; prepare scientific reports; provide persuasive and skilled leadership to other staff in scientific research, principles and methods; apply professional scientific knowledge and administrative ability to resolve a variety of situations; analyze situations accurately and take effective action. Participate as a team member of public health research or scientific investigation projects; make independent decisions in a very limited area of a scientific field; provide information to higher-level scientists in support of decisions on scientific research; interpret scientific findings and present to higher-level scientists; apply established guidelines and scientific techniques.
	DESIRABLE QUALIFICATIONS
	Skill to: - Perform literature searches and prepare scientific reports - Perform a variety of DNA extraction, amplification, genotyping, and sequencing methods - Perform eDNA analyses

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	- Perform statistical analyses of genetic data using traditional methods and high-performance computing and bioinformatics tools - Operate a variety of automated DNA analysis instruments - Write and follow laboratory procedures - Train lower-level staff to perform fisheries genetics and molecular biology laboratory procedures - Creatively improve laboratory techniques and improve laboratory efficiency **Special Personal Characteristics**: - Interest in fisheries conservation and management issues - Aptitude for detail - Good organizational skills - Personal initiative **Interpersonal Skills:** - Ability to work well within a team - Ability to work well independently **<u>WORKING CONDITIONS</u>** - Work several hours in a laboratory setting (both standing and sitting) - Work several hours on a computer - Occasional travel to remote locations when working with hatcheries and wild fishes

SUPERVISOR'S STATEMENT: **I HAVE DISCUSSED THE DUTIES OF THE POSITION WITH THE EMPLOYEE.**		
PRINT SUPERVISOR'S NAME Collen Burge (Research Scientist Supervisor)	**SUPERVISOR'S SIGNATURE**	**DATE**
EMPLOYEE'S STATEMENT: **I HAVE DISCUSSED WITH MY SUPERVISOR THE DUTIES OF THE POSITION AND HAVE RECEIVED A COPY OF THE DUTY STATEMENT.** **I HAVE READ AND UNDERSTAND THE DUTIES AND ESSENTIAL FUNCTIONS OF THE POSITION AND CAN PERFORM THESE DUTIES WITH OR WITHOUT REASONABLE ACCOMMODATION.**		
PRINT EMPLOYEE'S NAME	**EMPLOYEE'S SIGNATURE**	**DATE**